Library Management App

A small Library Management app in python

What is Library Management System.

- A Library Management System allows user to store books.
- It allows issuing books to student
- And allows user to return books to library
- If student fails to submit book in time it can charge overdue fine.

REQUIREMENTS

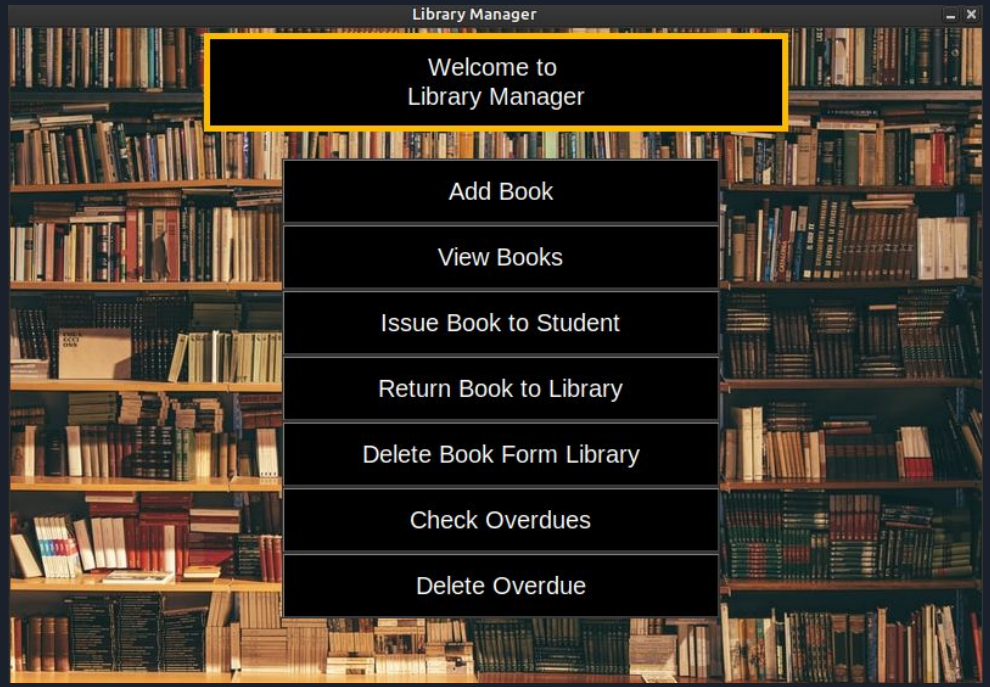
To build Application like this in Python you need.

- **A GUI Framework Like Tkinter**
- **A lightweight Database System like Sqlite3**

Steps to complete the project

- The first step is to create the initial interface of the by using tkinter and pillow library
- Next is to create script files such as app.py , AddBook.py, DeleteBook.py, ViewBooks.py, IssueBook.py, ReturnBook.py and OverduesBook.py
- To store data for handling operation we use python built in light weight database system Sqlite3
- Complete the backend functionality by making all of the scripts interacted with database.

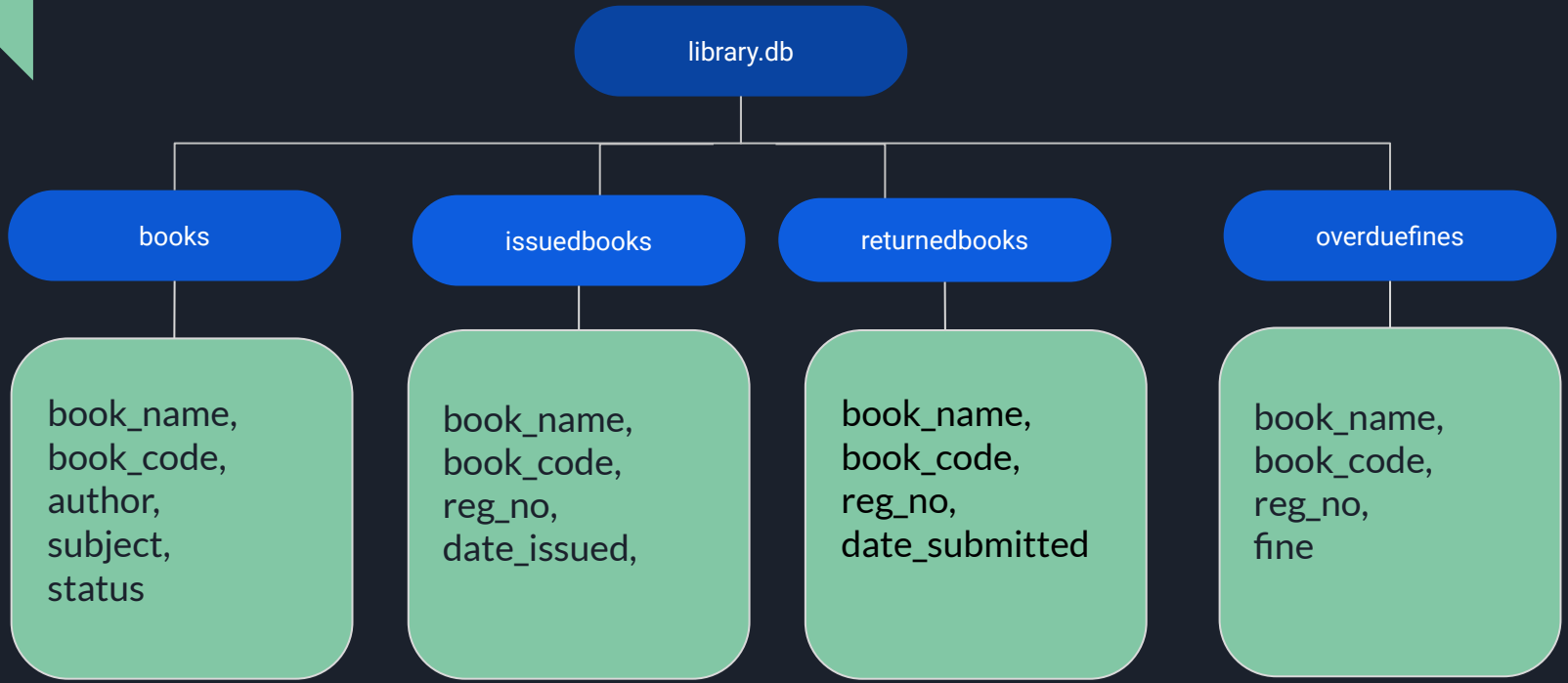
Initial Interface of the App



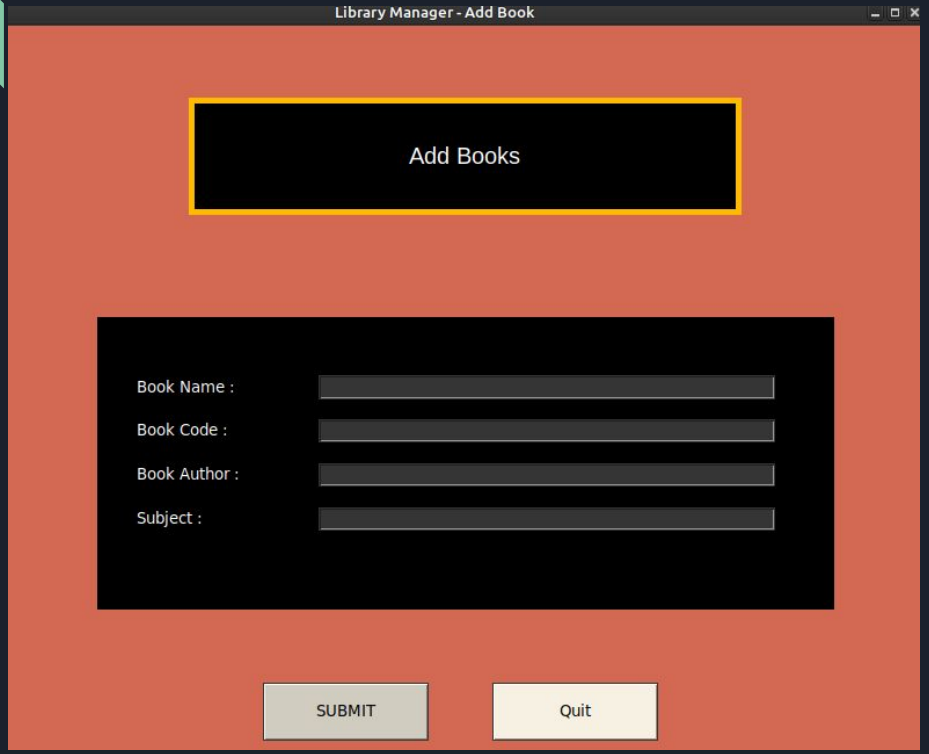
In the interface we have

- ➔ A background image
- ➔ A welcome note
- ➔ And Buttons
- ➔ Add Book :For adding books to library.
- ➔ View Books : For viewing books
- ➔ Issue book : For issuing book to student
- ➔ Return Book: For returning the book.
- ➔ Delete Book: For deleting a book entry.
- ➔ Check Overdues: For checking overdues.
- ➔ Delete Overdue: For deleting overdues.

Database Design



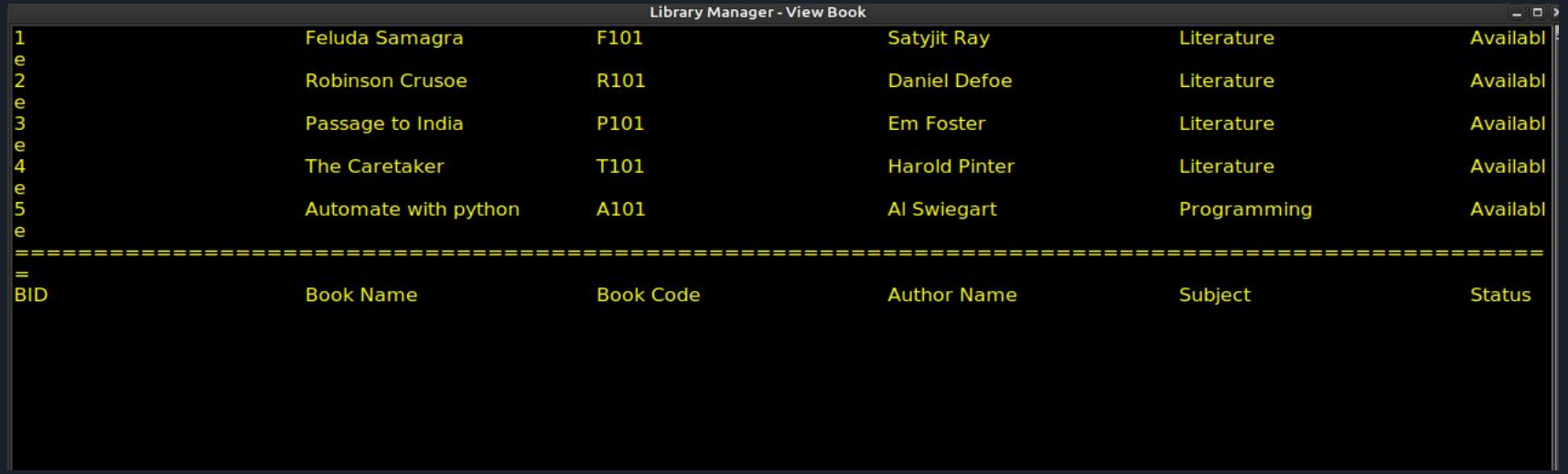
Add Book Interface



The user will have to fill up necessary fields to store data in database.

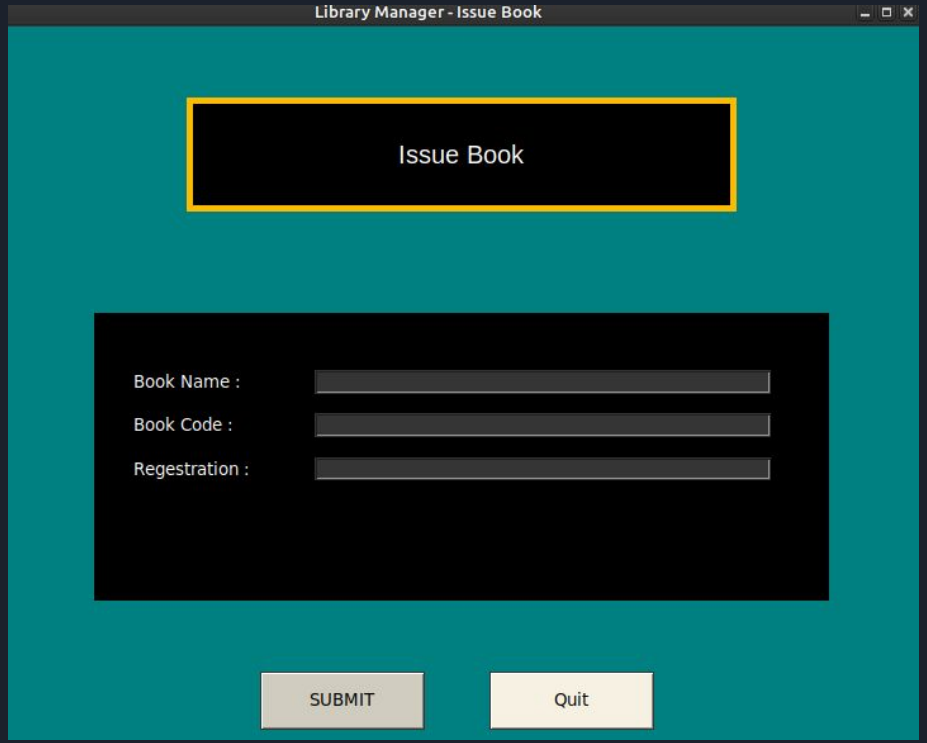
- Book Name : The name of the book.
- Book Code : Code number of the book
- Book Author : Author of the book.
- Subject : Category of the book.
- The Submit button will allow user to submit data if everything is ok.
- The Quit button will quit adding book application.

View Book Interface



This interface will allow user to understand Which books are available and issued by viewing status of the book. And also Book id number ‘BID’ and Book Name, Code, Author, Subject. Here the Book Code really matters cause this will be our link to issue and returning a book to library.

Issue Book Interface

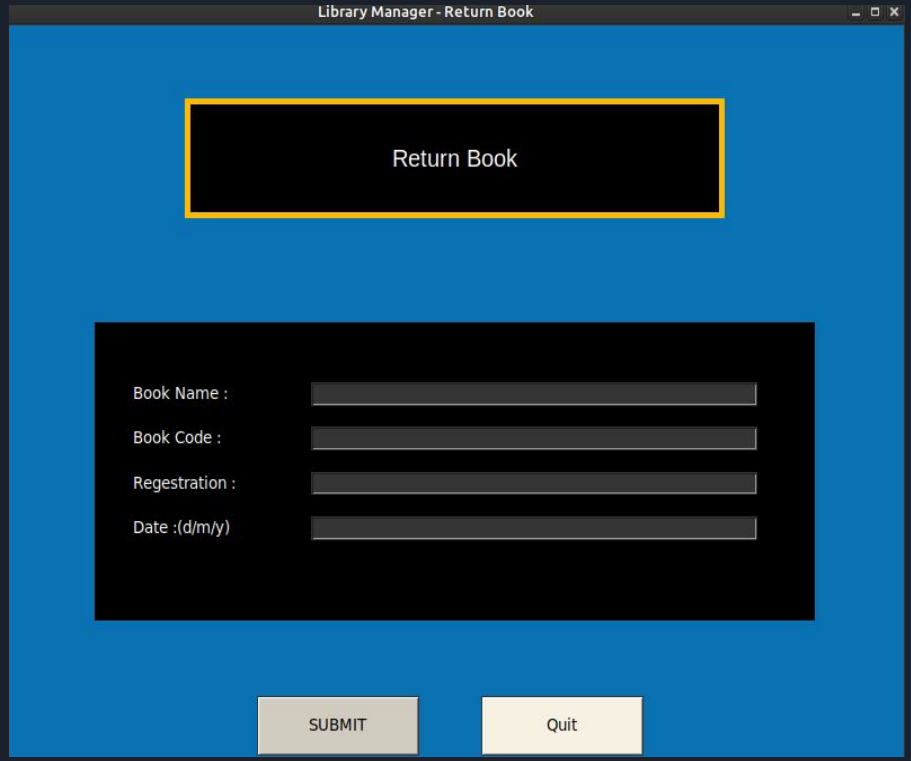


The user will have to fill up necessary fields to store data in database.

- Book Name : The name of the book.
- Book Code : Code number of the book
- Registration : Registration Number of the Student

The submit button will submit the data in issuedbooks table and will update the status issued from available in books table. Database will silently assign a issued date of the book and will notify the user when to submit the book. By default the student will get six days to return the book otherwise will be fined.

Return Book Interface

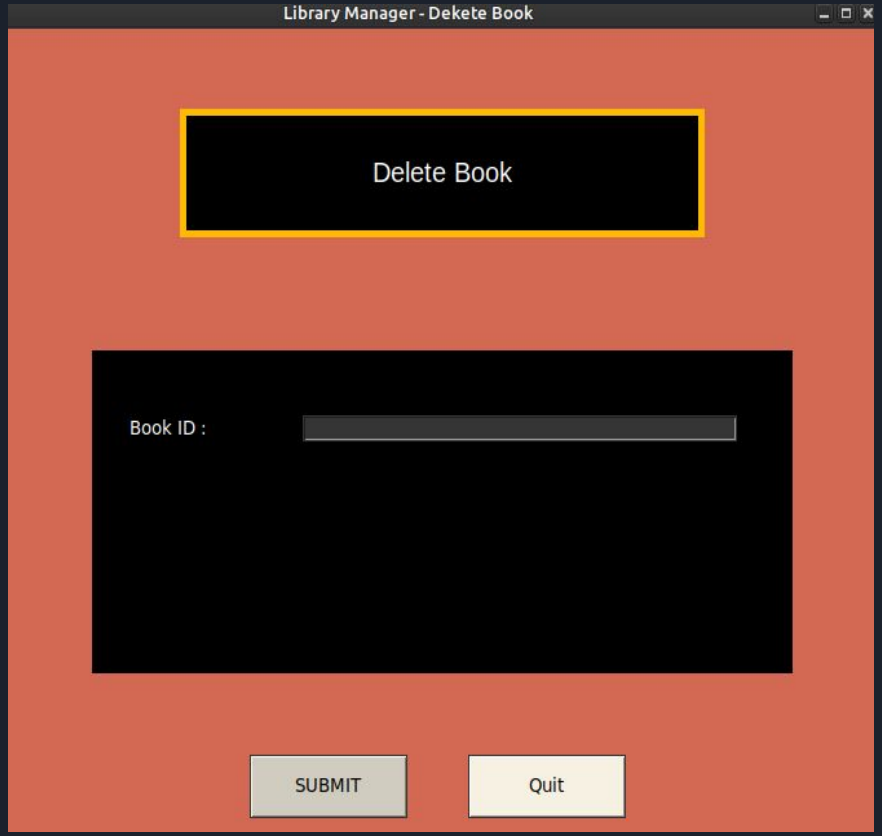


To Return the book back to library the user will have to fill up necessary fields to store data in database.

- Book Name : The name of the book.
- Book Code : Code number of the book
- Registration: Student Registration number
- Date: Submitting Date

When the student submits the book the database will check if the book has been submitted in given time otherwise the student will face charge for overdue.

Delete Book Interface

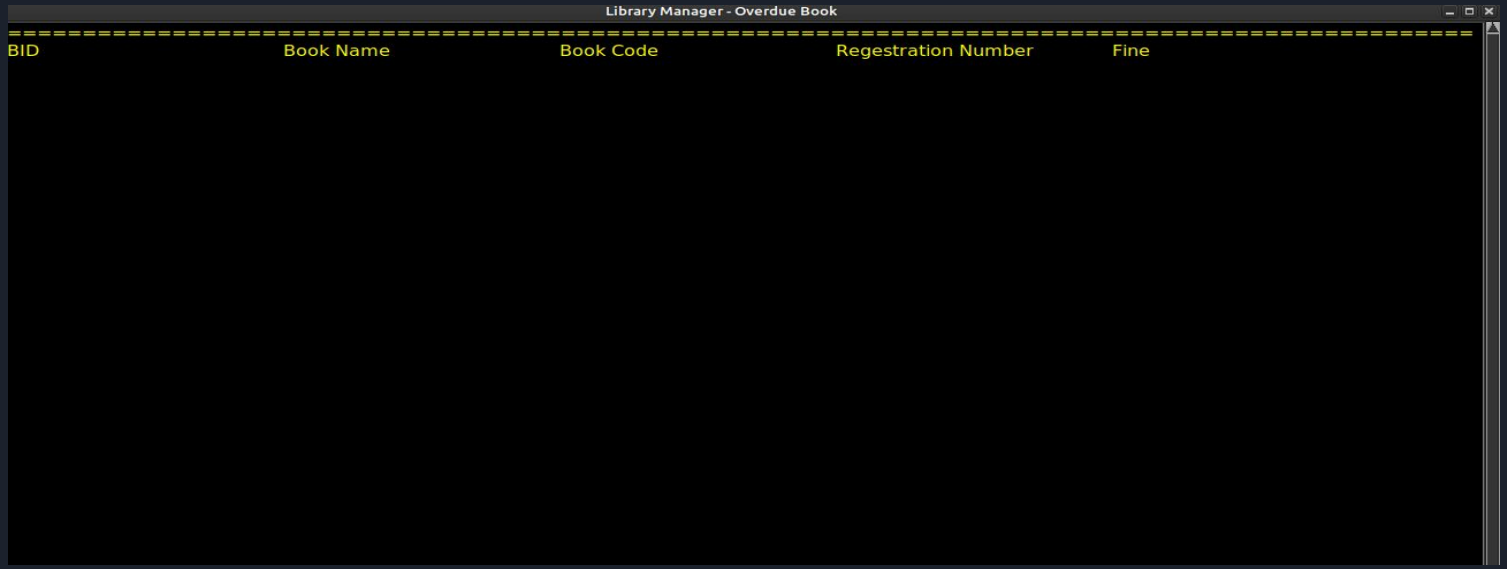


Sometimes user may want to delete a book entry if the book is not available anymore or want fix some issue. Therefore by using this functionality user will be able to delete a book from the library.

- First they have to fill up the Book id number. Now this is not book code number, this is the row id number of the book.
- Next Click submit to delete or quit to quit the application.

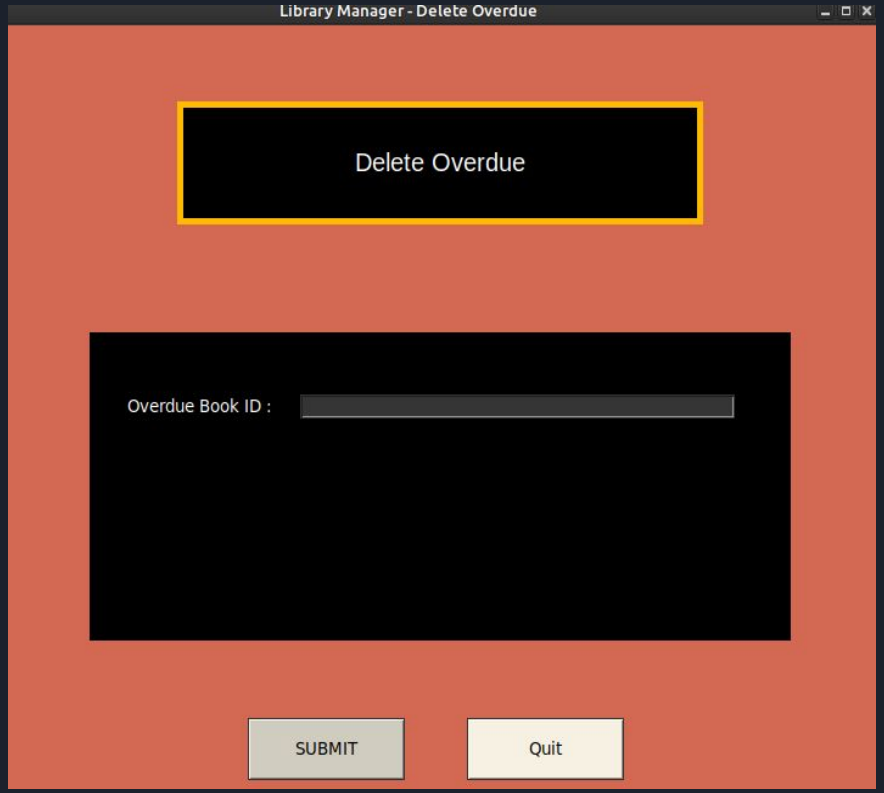
When the user clicks the submit button the database will identify the entry by id number and delete the entry from books table.

Check Overdue Interface



In this interface the user will see if any student has overdue charge on him. The Student will be Identified by his Registration number and charge will be seen in Fine field. Also additional information like BID, Book name and Book code will be available.

Delete Overdue



This interface will allow user to delete a overdue entry if the student pay his fine.

This is something user has to do manually. He will have to check overdue interface to get the id number of the entry.

He can delete overdue entry by submitting the overdue BID number.